

## Understanding the Data...

### **Student Confidentiality:**

In order to respect student confidentiality, we did not include the results for any aggregation of the data (e.g., county, grade, or gender) based on fewer than 20 participating students.

### **Margin of Error:**

The margin of error is a measure of how precisely the proportion of participating students who chose a particular response approximates the true proportion of all enrolled students (i.e., in the entire population) who would have chosen the same response if asked. It is based on the number of participating students, the size of the student enrollment, the proportion of students who chose a response, and the desired confidence level (in this case 95%).

The margin of error is reported as plus or minus a percentage. As an example, if a county has a margin of error of  $\pm 5\%$ , and 50% of the responding students picked a particular response, you can be "95% sure" that if the question had been answered by the entire student population, between 45% ( $50\% - 5\%$ ) and 55% ( $50\% + 5\%$ ) would have picked that response. The smaller the margin of error, the better. [Note: There is always the possibility that a high proportion of the students not answering a question (or not even taking the survey) would have answered differently, but that is difficult to determine.] The margins of error for the county, region, and state levels for the 1998, 2000, and 2002 surveys are listed in the tables below.

### **1998**

	<b>6th</b>	<b>7th</b>	<b>8th</b>	<b>9th</b>	<b>10th</b>	<b>11th</b>	<b>12th</b>	<b>Total</b>
<b>Maine</b>	$\pm 1.55$	$\pm 1.53$	$\pm 1.54$	$\pm 1.49$	$\pm 1.56$	$\pm 1.63$	$\pm 1.66$	$\pm 0.59$
<b>Region 1</b>	$\pm 2.58$	$\pm 2.57$	$\pm 2.69$	$\pm 2.60$	$\pm 2.69$	$\pm 2.82$	$\pm 3.03$	$\pm 1.02$
<b>Region 2</b>	$\pm 2.46$	$\pm 2.42$	$\pm 2.38$	$\pm 2.33$	$\pm 2.51$	$\pm 2.58$	$\pm 2.58$	$\pm 0.93$
<b>Region 3</b>	$\pm 3.11$	$\pm 3.09$	$\pm 3.04$	$\pm 2.90$	$\pm 2.97$	$\pm 3.15$	$\pm 3.10$	$\pm 1.15$
<b>Androscoggin</b>	$\pm 5.46$	$\pm 5.38$	$\pm 5.44$	$\pm 5.38$	$\pm 5.68$	$\pm 5.96$	$\pm 5.89$	$\pm 2.10$
<b>Aroostook</b>	$\pm 6.20$	$\pm 6.24$	$\pm 6.43$	$\pm 6.34$	$\pm 6.81$	$\pm 6.74$	$\pm 6.66$	$\pm 2.45$
<b>Cumberland</b>	$\pm 3.45$	$\pm 3.52$	$\pm 3.62$	$\pm 3.32$	$\pm 3.38$	$\pm 3.55$	$\pm 3.88$	$\pm 1.32$
<b>Franklin</b>	$\pm 9.51$	$\pm 9.31$	$\pm 9.74$	$\pm 9.60$	$\pm 9.87$	$\pm 10.19$	$\pm 10.61$	$\pm 3.69$
<b>Hancock</b>	$\pm 7.82$	$\pm 7.67$	$\pm 7.60$	$\pm 7.44$	$\pm 7.87$	$\pm 7.87$	$\pm 8.80$	$\pm 2.96$
<b>Kennebec</b>	$\pm 4.92$	$\pm 5.08$	$\pm 5.29$	$\pm 5.11$	$\pm 5.16$	$\pm 4.26$	$\pm 4.37$	$\pm 1.97$
<b>Knox</b>	$\pm 8.77$	$\pm 8.66$	$\pm 9.18$	$\pm 9.59$	$\pm 10.36$	$\pm 11.11$	$\pm 10.16$	$\pm 3.59$
<b>Lincoln</b>	$\pm 9.59$	$\pm 9.55$	$\pm 9.34$	$\pm 8.30$	$\pm 9.12$	$\pm 9.61$	$\pm 9.29$	$\pm 3.48$
<b>Oxford</b>	$\pm 7.13$	$\pm 7.05$	$\pm 6.59$	$\pm 6.08$	$\pm 6.36$	$\pm 7.37$	$\pm 6.07$	$\pm 2.51$
<b>Penobscot</b>	$\pm 4.79$	$\pm 4.82$	$\pm 4.61$	$\pm 4.36$	$\pm 4.45$	$\pm 4.71$	$\pm 4.69$	$\pm 1.75$
<b>Piscataquis</b>	$\pm 12.44$	$\pm 11.72$	$\pm 10.89$	$\pm 10.95$	$\pm 10.94$	$\pm 10.95$	$\pm 11.37$	$\pm 4.28$
<b>Sagadahoc</b>	$\pm 9.18$	$\pm 8.53$	$\pm 8.96$	$\pm 8.42$	$\pm 8.93$	$\pm 8.42$	$\pm 8.94$	$\pm 3.29$
<b>Somerset</b>	$\pm 8.51$	$\pm 7.32$	$\pm 6.64$	$\pm 6.60$	$\pm 7.69$	$\pm 7.52$	$\pm 7.38$	$\pm 2.76$
<b>Waldo</b>	$\pm 9.27$	$\pm 9.33$	$\pm 9.41$	$\pm 10.11$	$\pm 10.78$	$\pm 11.36$	$\pm 11.33$	$\pm 3.79$
<b>Washington</b>	$\pm 9.74$	$\pm 9.18$	$\pm 9.50$	$\pm 8.80$	$\pm 9.53$	$\pm 10.43$	$\pm 10.07$	$\pm 3.60$
<b>York</b>	$\pm 3.94$	$\pm 3.83$	$\pm 3.93$	$\pm 4.11$	$\pm 4.33$	$\pm 4.53$	$\pm 4.84$	$\pm 1.57$

2000

Maine	6th	7th	8th	9th	10th	11th	12th	Total
	±1.21	±1.16	±1.14	±1.27	±1.33	±1.40	±1.57	±0.48
Region 1	6th	7th	8th	9th	10th	11th	12th	Total
	±2.16	±2.11	±2.02	±2.32	±2.28	±2.57	±2.82	±0.86
Region 2	±1.95	±2.00	±1.87	±2.18	±2.51	±2.48	±2.91	±0.83
Region 3	±2.17	±1.89	±2.01	±2.08	±2.10	±2.20	±2.44	±0.79
Androscoggin	±4.02	±4.00	±4.11	±4.75	±5.47	±5.41	±5.75	±1.75
Aroostook	±4.02	±2.59	±2.61	±2.84	±2.89	±2.95	±3.41	±1.12
Cumberland	±2.84	±2.74	±2.61	±2.76	±2.65	±3.03	±3.30	±1.06
Franklin	±23.30	±21.44	±19.48		±10.50	±11.12	±11.97	±5.85
Hancock	±7.52	±7.72	±7.77	±10.26	±10.52	±11.59	±11.64	±3.44
Kennebec	±5.29	±4.88	±5.55	±6.27	±6.48	±6.97	±7.16	±2.25
Knox	±5.16	±5.44	±5.30	±4.21	±4.45	±4.88	±7.36	±1.92
Lincoln	±7.34	±7.45	±7.13	±11.19	±12.27	±14.35	±15.12	±3.56
Oxford	±3.20	±4.49	±2.45	±2.47	±4.87	±3.31	±5.02	±1.30
Penobscot	±4.05	±4.32	±5.18	±4.06	±4.16	±4.24	±5.15	±1.66
Piscataquis	±5.63	±3.49	±3.61	±5.30	±5.07	±6.26	±5.87	±2.85
Sagadahoc	±6.09	±4.68	±4.52					±4.40
Somerest	±12.52	±15.11	±12.81	±10.01	±10.12	±12.26	±12.46	±4.48
Waldo	±4.95	±4.68	±5.09	±6.12	±6.44	±7.28	±8.63	±2.18
Washington	±4.20	±3.85	±3.86	±4.16	±3.95	±4.35	±4.36	±1.52
York	±3.42	±3.51	±3.45	±4.77	±4.93	±5.45	±6.06	±1.60

2002

Maine	6th	7th	8th	9th	10th	11th	12th	Total
	±0.69	±0.68	±0.68	±0.82	±0.83	±0.91	±1.03	±0.30
Region 1	6th	7th	8th	9th	10th	11th	12th	Total
	±1.07	±1.11	±1.13	±1.30	±1.26	±1.45	±1.66	±0.47
Region 2	±1.02	±0.96	±0.98	±1.24	±1.30	±1.39	±1.63	±0.44
Region 3	±1.76	±1.72	±1.67	±1.95	±1.93	±2.11	±2.22	±0.71
Androscoggin	6th	7th	8th	9th	10th	11th	12th	Total
	±1.50	±2.08	±1.92	±3.01	±3.42	±3.80	±3.74	±1.00
Aroostook	±2.74	±2.48	±2.62	±2.85	±2.64	±3.12	±3.33	±1.06
Cumberland	±1.29	±1.47	±1.33	±1.47	±1.46	±1.72	±2.05	±0.58
Franklin	±2.39	±2.90	±3.05	±3.20	±3.37	±3.34	±4.79	±1.23
Hancock	±4.72	±6.51	±4.71	±5.77	±4.91	±6.66	±5.86	±2.08
Kennebec	±2.35	±1.93	±2.02	±3.22	±3.34	±3.46	±4.25	±1.06
Knox	±4.50	±4.33	±4.24	±4.13	±3.42	±4.40	±8.00	±1.71
Lincoln	±4.67	±5.27	±4.76	±7.56	±7.42	±7.24	±8.20	±2.37
Oxford	±5.65	±2.45	±2.54	±3.19	±3.56	±3.48	±4.14	±1.28
Penobscot	±3.33	±3.33	±3.43	±3.88	±3.84	±3.93	±4.39	±1.40
Piscataquis	±5.62	±3.72	±2.61	±3.51	±7.89	±6.93	±7.03	±2.12

<b>Sagadahoc</b>	±1.87	±2.47	±2.23	±2.27	±2.50	±2.46	±3.04	±0.90
<b>Somerest</b>	±2.93	±3.29	±3.57	±3.47	±3.49	±4.03	±4.25	±1.35
<b>Waldo</b>	±5.91	±5.28	±5.86	±5.80	±6.85	±7.22	±9.09	±2.40
<b>Washington</b>	±4.01	±3.11	±3.34	±4.19	±4.74	±4.67	±5.37	±1.57
<b>York</b>	±1.82	±1.70	±1.98	±2.51	±2.35	±2.62	±2.82	±0.83

The stated margins of error are "best case scenarios" in that they assume that all participating students answered all the questions. Most questions were not answered by all of the students taking the survey. For any question that is answered by less than 100% of the participating students, the margin of error will be higher than stated.

The margin of error calculations assume that each student in the population under study has an equal chance of becoming a participant. If this assumption is not met, the margin of error estimates are not correct.

For further information regarding margin of error, you may wish to visit the American Statistical Association's website at <http://www.amstat.org> where you will find a pdf file explaining margin of error (<http://www.amstat.org/sections/srms/brochures/margin.pdf>).

#### ***Screening out Unusable Surveys:***

There are several questions that were used to detect surveys that were answered untruthfully. These surveys were eliminated from the database.